



tl cf Kk ddv KERALA GAZETTE

ആധികാരികമായി പ്രസിദ്ധപ്പെടുത്തുന്നത്
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PART III Stores Purchase

Fire and Rescue Services Department

e-TENDER NOTICES

(1)

No. F1-11579/2012/KFRS-1. 5th September 2014.

e-Tenders in two cover system are invited from competent dealers for the supply of 100 Nos. of Fire Fighting Suit with respective Specifications to Fire and Rescue Services Department. The tender is to be submitted as e-tenders through <https://etenders.kerala.gov.in>. Since this is an e-tender, only those bidders who have enrolled in the above portal with their own digital signature certificate (DSC) can participate in the tender.

e-Tender document and other details can be obtained from the above e-portal.

The tender has two parts.

1. Technical bid.
2. Financial bid (BOQ).

Tender No. with PAC—KFRS/E-Tender/Re-Tender No. 08/2014-15—` 100 Lakh.

EMD—1% of PAC in online payment.

Security Deposit—5% of total contract amount inclusive of EMD. To be furnished as online payment.

Cost of e-Tender (online submission)—` 15,000 + VAT @ 5%.

Closing date and time of e-tender—20-10-2014, 5 p. m.

Last date and time of receipt of e-tender—20-10-2014, 5 p. m

Date and time of opening of e-tender:

1. Technical bid—24-10-2014, 11 a. m.
2. Financial bid—28-10-2014, 11 a. m.

Date upto which the rates are to remain firm for acceptance—31-3-2015.

Period of supply—Within 40 days of receipt of supply order.

The bidder desiring to take part in the bid shall log into <https://etenders.kerala.gov.in> and then select tender and initiate payment. Bidders will be directed to the payment gateway page of the State Bank of Travancore. There are two options-State Bank of Travancore (SBT Net banking payment, payment through NEFT from other banks to the payment gateway of SBT).

For obtaining digital signature certificate (DSC) and necessary portal enrolment bidders can visit the website <https://etenders.kerala.gov.in>.

Tenders will be opened in the online presence of such tenderers or their authorized representatives who have logged in at the prescribed time of opening technical & financial bids. If the date fixed for opening happens to be a holiday/due to net failure the tenders will be opened in the next working day, at the same time.

The price of the e-tender form shall be received only through online payment, SBT/SBT NEFT.

The cost should be quoted in Indian currency only.

The tender has two covers

- Technical cover
- Financial cover

The first cover ie: the technical cover shall be uploaded with the following document.

1. Scanned copy of complied specification of the product intended to supply.
2. Scanned copy of the agreement in the prescribed format in Kerala Stamp Paper worth ` 100.

3. Brochure of the product intended to supply.
4. Work experience certificate or other relevant details.
5. Scanned copies of the declaration by the bidder on Kerala Stamp Paper worth ` 100 to the effect that he/his partner/s or any of his directors is not involved in any Vigilance Case registered in connection with any supply made to this Department.

Soon on opening the technical bid of e-tenders the committee constituted to evaluate the technical aspects of the instrument will meet and scrutinize the technical specification of the equipment submitted with the e-tender.

The financial bid belonging to those dealers/suppliers who qualified in the technical bid of the equipment required by Kerala Fire & Rescue Services Department alone will be considered.

On finalization of the same, The Second cover ie. the financial bid of the concerned competent firm will be opened for consideration.

The originals of Complied Technical Specification, Agreement in stamp paper worth ` 100 and the item intended to supply shall be produced before the undersigned soon after the Financial Bid opening. After opening the financial bid, financial evaluation is made only after consultation with the DPC and the decision of the DPC shall be final and will be uploaded in the financial evaluation field of the e-tender site whether the tender is financially admitted or not and thereafter the awarding of the contract.

The committee headed by the Commandant General, Kerala Fire & Rescue Services Department will scrutinize the tenders received and will recommend suitably. The decision of the Commandant General will be final for the award of the contract.

The right of acceptance or rejection of e-tender without assigning any reason is solemnly vested with Commandant with Commandant General, Kerala Fire & Rescue Services.

The rules and regulations prescribed for e-tenders by the Government of Kerala shall be applicable to this e-tender also.

Details with respect to the e-tender and the details of specifications of the item to be purchase can be obtained from the e-tender website <https://etenders.kerala.gov.in>.

Any legal disputes that may arise in relation to the e-tender formalities will be restricted to the jurisdiction of Thiruvananthapuram District Court.

CONDITIONS

1. Whether samples are essential : Pamphlets, Photograph, Drawings CDS etc. should be forwarded along with the tender. Sample Fire Fighting Suit is also produced at the earliest.
2. Period with in which goods should be delivered : Within 40 days from receipt of supply order.
3. Rates should be quoted for the delivery including transportation charge : f.o.r. Thiruvananthapuram
4. Payment : 90% Payment against delivery at Thiruvananthapuram in good condition.
5. Other Special condition :
 1. A guarantee/warranty of 12 months from the delivery of the item.
 2. EMD 1% of PAC in online payment.
 3. Security Deposit 5% of total contract amount inclusive of EMD to be furnished as online payment as mentioned in the Notice inviting e-Tender.
 4. Any firm whose proprietor, Partner or Director is involved in a Vigilance Case registered in connection with a supply made to this Department earlier shall be barred from participating in this tender.
 5. Canvassing in any manners at any time shall disqualifying of the tenderer.

Technical Specification for Fire Fighting Suit

The design of the suit shall be strictly as per EN 469:2005 stand OR equivalent NFPA stands for fire fighters protective clothing. It shall protect the neck, arms, legs and trunk and shall consist of trousers overlapping at least 30 cm. This suit shall not hinder freedom of movements of fireman, and shall be compatible with the other parts of the fire fighters and equipments such as breathing apparatus set. This suit shall be as light as possible and shall be easy to clean and maintain. It shall offer protection at wrist against penetration of flaming or hot materials. Seams, fasteners, zippers, labels and other accessories must not impair the performance of the garment.

The entire suit and accessories shall be CE certified to EN 469:2005 stand OR equivalent NFPA stands. Detailed test report showing high flame resistance as per EN/NFPA requirements should be provided for technical evaluation.

JACKET AND TROUSER

Construction of Both Jacket & Trouser

- Outer layer should be made of NOMEX Delta C/Nomex III/Nomex Tough-with minimum fabric of 200 gsm.
- Middle layer (Moisture Barrier) should be made of suitable materials with suitable fire retardant breathable polyurethane membrane weighing minimum 135 gsm and laminated with Nomex non woven.
- Inner layer (Thermal Barrier) should be made from inherently flame retardant non-woven material with Nomex as the thermal lining for better heat insulation.
- Only NOMEX threads shall be used for stitching the suit.
- Retro Reflective tapes in red colour should be fixed on both Jacket and Trouser and the reflective tapes used shall be flame resistant with minimum width of 50 mm.

Design of the Jacket

- The three-layer coat shall have a front fastening zip arrangement with an overlapping flap with Nomex Velcro or equivalent.
- The cuff shall be provided with additional Nomex or equivalent tight fit for better protection against flame.
- Non detachable lining.
- Inspection opening at the bottom of Jacket between outer fabric and moisture barrier or lining.
- Front zipper extending to collar.
- Throat closure with straps made from outer fabric.
- Red colour retro-reflective tape of 5 cm should be provided around the part of the sleeves, around the chest and bottom part of the Jacket.
- Drag rescue device with flap should be incorporated in the back.
- Microphone strap should be placed above radio pocket on the left front.
- "FIRE AND RESCUE" should be written in red fluorescent colour in clearly visible size on the back side.
- Adjustable radio pocket on the left breast.
- The coat shall be provided with minimum 1 internal pocket 2 external pockets (Flat pocket) should be placed in front bottom left and bottom right.

Design of Trouser

- The pant shall be light weight with suitable layers designed to be provided with heavy-duty suspender with quick release snaps to the front and fly zipper.
- Elastic intake in both sides at waist to fit to any size.
- The knee area shall be reinforced with suitable strong materials like Kevlar.
- The design of the pant shall be standard type with 1 internal pocket.
- Red colour retro-reflective tape of 5 cm should be provided around the lower part of the pants.
- 2 layer Aramid felt fabric should be placed between outer material and Kevlar reinforcement.

FIRE FIGHTER BOOT

Design of the Boot

- The Boots should be made from flame retardant rubber with steel toe cap and inner lining of Nomex and Kevlar fabric for better insulation and should be conforming to EN 15090:2006 or equivalent NFPA standards. It shall be CE approved.
- It shall be light weight, water and oil resistant and made from the best material suitable for any fire fighting applications.
- The Boots should be provided with carrying arrangements on top and with anti-skid sole. These boots should be made available in various sizes.

FIRE FIGHTER GLOVE

Design of the Glove

- The Glove should be made from multilayer material offering good protection and should be conforming to EN 659:2003 or equivalent NFPA standards. It shall be CE approved.
- PALM LAYER: The palm shall be made strong fire retardant material like Silicon coated Nomex/Kevlar double face fabric or treated leather.
- MIDDLE LAYER: The middle layer shall be made from KEVLAR or similar non-woven/knitted material suitably laminated and lined for heat and cut protection.
- UPPER LAYER: The upper layer and cuff made of high quality Nomex III/Nomex Delta T/Nomex Tough or equivalent fire retardant material.
- Hook and eye shall be provided for connection or it shall have elastic self-fitting arrangement with the users wrist.
- It shall be provided with flexible wristlet adjustment.

- Outer material of the cuff should also be of inherently flame retardant material.
- The Glove should be provided with reflective tape.
- The Glove should offer resistance against heat, water and abrasion and should ensure maximum sensitivity and comfort for work.

FIRE FIGHTER HELMET

Purpose

- All round head protection in any fire fighting situation. It shall be possible to wear breathing apparatus facemask conforming to EN 136 along with the helmet. It shall be made of highly temperature resistant material, and should withstand the most intense heat. It shall be provided with an ultra modern inner lining made of flame resistant, washable material and suitable head adjustment system to fit all sizes. Weight shall not be more than 800 g. The helmet shall confirm to EN 443/2008 standard.

Helmet Shell

- Outer shell all be made of fibreglass strengthened high temperature fibre.
- Should be made from flame retardant material.
- Should be oval shaped and smooth exterior surface.

Interior Basket

- Manufacturing material should be of flame retardant.
- Adjustment as per head size and shape should be possible (52 to 63 cms).
- Should have high shock absorbing quality.
- The lining shall be strong, flame resistant and washable and should be of special material to prevent skin irritation.

Chin Strap

- Should be made of flame retardant cotton material made to purpose.
- Chin strap shall be either rotating ratchet type or 4-point chin-neck strap with plug in connector so as to fit all sizes.

Adjustable Face Protector Visor

- Visor shall be 2mm polycarbonate, anti-scratch coated, Optical class 2, ballistic protection class B and approved to EN.
- The visor shall be slidable into the helmet when not required. It shall not be tilt up and down type.
- Should offer face protection against elevated temperatures and mechanical impact.
- Reflective tapes made of flame resistant material shall be provided.

ANTIFLASH HOOD

The antifiash hood shall be comfortable to wear and shall offer superior resistance to high temperature and direct flame contact. The hood shall be easily washable/dry-cleanable and must be possible to wear over a breathing facemask or under the fireman's helmet. The antifiash hood shall be as per EN13911:2004 standard.

COMPLIANCE STATEMENT

A specification compliance statement in the following performa shall be submitted along with the offer, and the statement should be complete in all aspect and should cover each and every details of specification.

Specification compliance statement for Fire Fighting Suit

Sl. No.	Detail of Departmental Technical Specification	Detail of the product offered	Deviation from Departmental Technical Specification, if any
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(2)

No. F1-12205/2014/KFRS-1.

5th September 2014.

e-Tenders in two cover system are invited from competent dealers for the supply of 4 Nos. of Jumping Cushions with respective Specifications to this Department. The tender is to be submitted as e-tenders through <https://etenders.kerala.gov.in>. Since this is an e-tender, only those bidders who have enrolled in the above portal with their own digital signature certificate (DSC) can participate in the tender. e-Tender document and other details can be obtained from the above e-portal.

The tender has two parts.

1. Technical bid.
2. Financial bid (BOQ).

Tender No. with PAC—KFRS/E-Tender No. 13/2014-15—` 96 Lakh.

EMD—1% of PAC in online payment.

Security Deposit—5% of total contract amount inclusive of EMD. To be furnished as online payment.

Cost of e-Tender (online submission)—` 14,400 + VAT @ 5%.

Closing date and time of e-tender—20-10-2014, 5 p. m.

Last date and time of receipt of e-tender—20-10-2014, 5 p. m

Date and time of opening of e-tender:

1. Technical bid—24-10-2014, 11 a. m.
2. Financial bid—28-10-2014, 11 a. m.

Date upto which the rates are to remain firm for acceptance—31-3-2015.

Period of supply—Within 40 days of receipt of supply order.

The bidder desiring to take part in the bid shall log into <https://etenders.kerala.gov.in/> and then select tender and initiate payment. Bidders will be directed to the payment gateway page of the State Bank of Travancore. There are two options—State Bank of Travancore (SBT) Net banking payment, payment through NEFT from other banks to the payment gateway of SBT.

For obtaining digital signature certificate (DSC) and necessary portal enrolment bidders can visit the website <https://etenders.kerala.gov.in/>.

Tenders will be opened in the online presence of such tenderers or their authorized representatives who have logged in at the prescribed time of opening technical & financial bids. If the date fixed for opening happens to be a holiday/due to net failure the tenders will be opened in the next working day at the same time.

The price of the e-tender form shall be received only through online payment—SBT/SBT NEFT.

The cost should be quoted in Indian currency only.

The tender has two covers

- Technical cover
- Financial cover

The first cover ie: the technical cover shall be uploaded with the following document.

1. Scanned copy of complied specification of the product intended to supply.
2. Scanned copy of the agreement in the prescribed format in Kerala Stamp Paper worth ` 100.
3. Brochure of the product intended to supply.
4. Work experience certificate or other relevant details.
5. Scanned copies of the declaration by the bidder on Kerala Stamp Paper worth ` 100 to the effect that he/his partner/s or any of his directors is not involved in any Vigilance Case registered in connection with any supply made to this Department.

Soon on opening the technical bid of e-tenders, the committee constituted to evaluate the technical aspects of the instrument will meet and scrutinize the technical specification of the instrument submitted with the e-tender.

The financial bid belonging to those dealers/suppliers who qualified the technical bid of the instrument required by Kerala Fire & Rescue Services Department alone will be considered.

On finalization of the same, The Second cover ie. the financial bid of the concerned competent firm will be opened for consideration.

The originals of Complied Technical Specification, Agreement in stamp paper worth ` 100 and the item intended to supply shall be produced before the undersigned soon after the Financial Bid opening. After opening the financial bid, financial evaluation is made only after consultation with the DPC and the decision of the DPC shall be final and be uploaded in the financial evaluation field of the e-tender site whether the tender is financially admitted or not and thereafter the awarding of the contract.

The committee headed by the Commandant General, Kerala Fire & Rescue Services Department will scrutinize the tenders received and will recommend suitably. The decision of the Commandant General will be final for the award of the contract.

The right of acceptance or rejection of e-tender without assigning any reason is solemnly vested with Commandant General, Kerala Fire & Rescue Services.

The rules and regulations prescribed for e-tenders by the Government of Kerala shall be applicable to this e-tender also.

Details with respect to the e-tender and the details of specifications of the item to be purchased can be obtained from the e-tender website <https://etenders.kerala.gov.in>.

Any legal disputes that may arise in relation to the e-tender formalities will be restricted to the jurisdiction of Thiruvananthapuram District Court.

CONDITIONS

1. Whether samples are essential : Pamphlets, Photograph, Drawings CDS etc. should be forwarded along with tender.
2. Period within which goods should be delivered : Within 40 days from receipt of supply order.
3. Rates should be quoted for the delivery of all taxes including transportation charge, customs duty : f.o.r., Thiruvananthapuram
4. Payment : 90% Payment against delivery at Thiruvananthapuram in good condition.

5. Other Special Conditions :
 1. A warrantee of 12 months from the date of delivery of the item.
 2. EMD—1% of PAC in online payment .
 3. Security Deposit 5% of total contract amount inclusive of EMD to be furnished as mentioned in the Notice inviting e-tender.
 4. Any firm whose proprietor, Partner or Director is involved in a Vigilance Case registered in connection with a supply made to this Department earlier shall be barred from participating in this tender.
 5. Anybody attempting to offer bribe or otherwise influence the officials of the Kerala Fire and Rescue Services will be disqualified from participating the tender.

Specification for Jumping Cushion

1. It should be inflatable and deflatable.
2. The maximum jump height should be 23 Metres.
3. The recovery time should be 20 seconds between the jumps.
4. Can be placed on any surface including gravel and kerbstones.
5. It should have relief valves to prevent over pressure.
6. Length, Breadth, Height—4.5 x 4.5 x 2.3 Metres.
7. Ground required—4.9 x 4.9 Metres.
8. Deployment—4 Persons per 60 seconds.
9. Inflation—1 x 8 Litres/300 bar cylinder.
10. Connection—Should be inflatable .with standard air cylinder/BA Set.
11. Weight—Maximum 80 Kg with cylinder.
12. The cushion comprised of an inflatable frame which supports a high strength flame retardant PVC coated fabric.
13. Inflation is from a 300 bar air cylinder, the connection for which will be compatible with the BA Set of the State Fire Service.

COMPLIANCE STATEMENT

A specification compliance statement in the following performa shall be submitted along with the offer, and the statement should be complete in all aspect and should cover each and every details of specification.

Specification compliance statement for Jumping Cushion

<i>Sl. No.</i>	<i>Detail of Departmental Technical Specification</i>	<i>Detail of the product offered</i>	<i>Deviation from Departmental Technical Specification, if any</i>
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(3)

No. F1-11974/2014/KFRS-1. 19th September 2014.

e-Tenders in two cover system are invited from competent dealers for the supply of 15 Nos. of Hydraulic Rescue Tools (4 Set) with respective specifications to the Fire and Rescue Services Department, Thiruvananthapuram. The tender is to be submitted as e-tenders through <https://etenders.kerala.gov.in>. Since this is an e-tender, only those bidders who have enrolled in the above portal with their own digital signature certificate (DSC) can participate in the tender.

e-Tender document and other details can be obtained from the above e-portal.

The tender has two parts

1. Technical bid.
2. Financial bid (BOQ).

Tender No. with PAC—KFRS/E-Tender No. 09/2014-15—` 105 Lakh.

EMD—1% of PAC in online payment.

Security Deposit—5% of total contract amount inclusive of EMD. To be furnished as online payment.

Cost of e-Tender (online submission)—` 15,800 + VAT @ 5%.

Closing date and time of e-tender—20-10-2014, 5 p. m.

Last date and time of receipt of e-tender—20-10-2014, 5 p. m

Date and time of opening of e-tender:

1. Technical bid—24-10-2014, 11 a. m.
2. Financial bid—28-10-2014, 11 a. m.

Date upto which the rates are to remain firm for acceptance—31-3-2015.

Period of Supply—Within 40 days of receipt of supply order.

The bidder desiring to take part in the bid shall log into <https://etenders.kerala.gov.in> and then select tender and initiate payment. Bidders will be directed to the payment gateway page of the State Bank of Travancore. There are two options—State Bank of Travancore (SBT) Net banking payment, payment through NEFT from other banks to the payment gateway of SBT.

For obtaining digital signature certificate (DSC) and necessary portal enrollment bidders can visit the website <https://etenders.kerala.gov.in/>.

Tenders will be opened in the online presence of such tenderers or their authorized representatives who have logged in at the prescribed time of opening technical & financial bids. If the date fixed for opening happens to be a holiday/due to net failure the tenders will be opened in the next working day, at the same time.

The price of the e-tender form shall be received only through online payment—SBT/SBT NEFT.

The cost should be quoted in Indian currency only.

The tender has two covers

- Technical cover
- Financial cover

The first cover ie: the technical cover shall be uploaded with the following document.

1. Scanned copy of complied specification of the product intended to supply.
2. Scanned copy of the agreement in the prescribed format in Kerala Stamp Paper worth ` 100.
3. Brochure of the product intended to supply.
4. Work experience certificate or other relevant details.
5. Scanned copies of the declaration by the bidder on Kerala Stamp Paper worth ` 100 to the effect that he/his partner/s or any of his directors is not involved in any Vigilance Case registered in connection with any supply made to this Department.

Soon on opening the technical bid of e-tenders the committee constituted to evaluate the technical aspects of the instrument will meet and scrutinize the technical specification of the equipment submitted with the e-tender.

The financial bid belonging to those dealers/suppliers who qualified in the technical bid of the equipment required by Kerala Fire & Rescue Services Department alone will be considered.

On finalization of the same, The Second cover ie. the financial bid of the concerned competent firm will be opened for consideration.

The originals of Complied Technical Specification, Agreement in stamp paper worth ` 100 and the item intended to supply shall be produced before the undersigned soon after the Financial Bid opening. After opening the financial bid, financial evaluation is made only after consultation with the DPC and the decision of the DPC shall be final and will be uploaded in the financial evaluation field of the e-tender site whether the tender is financially admitted or not and thereafter the awarding of the contract.

The committee headed by the Commandant General, Kerala Fire & Rescue Services Department will scrutinize the tenders received and will recommend suitably. The decision of the Commandant General will be final for the award of the contract.

The right of acceptance or rejection of e-tender without assigning any reason is solemnly vested with Commandant General, Kerala Fire & Rescue Services.

The rules and regulations prescribed for e-tenders by the Government of Kerala shall be applicable to this e-tender also.

Details with respect to the e-tender and the details of specifications of the item to be purchased can be obtained from the e-tender website <https://etenders.kerala.gov.in>.

Any legal disputes that may arise in relation to the e-tender formalities will be restricted to the jurisdiction of Thiruvananthapuram District Court.

CONDITIONS

1. Whether samples are essential : Pamphlets, Photograph, Drawings, CDS etc. should be forwarded along with tender.
2. Period within which goods should be delivered : Within 40 days from receipt of supply order.
3. Rates should be quoted for the delivery including transportation charge : f.o.r., Thiruvananthapuram
4. Payment : 90% Payment against delivery at Thiruvananthapuram in good condition.
5. Other Special condition :
 1. A warrantee of 12 months from the delivery of the item.
 2. EMD 1% of PAC in online payment.
 3. Security Deposit 5% of total contract amount inclusive of EMD to be furnished as mentioned in the Notice inviting e-Tender.

4. Any firm whose Proprietor, Partner or Director is involved in a Vigilance Case registered in connection with a supply made to this Department earlier shall be barred from participating in this tender.
5. Anybody attending to offer bribe or otherwise influence the officials of the Kerala Fire and Rescue Services will be disqualified from participating in the tender.
6. A 3 years AMC should be provided by the qualified firm after the warranty period, amount also quoted in the bid.
7. Training will be given by the Bidder to the staff of this Department as and when required within one year from the date of delivery at their own cost.

Technical Specification for Hydraulic Rescue Tools

GENERAL REQUIREMENT

- The Hydraulic Rescue tools shall be portable and light-weight and shall be suitable to use by one man. The Hydraulic Rescue tools shall be supplied in set form, consist of main equipment like spreader, cutter, telescopic ram and hoses and power pack or manual pump along with all the accessories.
- The Hydraulic Rescue tools and its accessories shall comply with all the requirements stipulated under EN13204 or equivalent national/international standards.
- For the safety of the operators, victims and bystanders, the tools shall be powered by non-toxic, mineral based hydraulic oil. Any toxic fluid shall not be used.
- All pressure hoses shall have a safety factor of not less than 4 times the maximum working pressure. All hoses shall be provided with anti kink springs with exception of the non-kinking one hose system.
- All tools, hoses and pumps shall be equipped compact, non-drip, quick-connect couplings fast and easy connection. All female couplers shall be equipped with automatic self-locking to prevent accidental disconnection. The couplers would have 360 degrees free movement for easy uncoiling.

- The hydraulic rescue tools shall be designed to withstand a test pressure of two times their maximum working pressure. Each tool has to be equipped with two internal safety valves for protection against any type of mechanical or hydraulic overload for each cylinder and each tool shall have a separate safety valve for protection against overpressure, in case one of the return couplers is disconnected. Moreover, all tools shall comply with the European CE safety standards and European Norm EN 13204 or equivalent national/international standards.
- All hydraulic rescue tools shall be equipped with automatic devices to hold any load in any position when the control valve is in neutral position, or in cases of disconnected couplers or sudden pressure drops.
- The cutters and spreaders shall be provided with a non-slip, U-shaped carrying handle which allows free movement of the tool from one side to the other. The carrying handle would be mounted in such a way that the tool is fully balanced, even when the tool is picked up with one hand. The position of the carrying handle and the control handle shall allow easy operation for right handed as well as left handed operators.
- Hydraulic rescue tools shall be provided with, double acting hydraulic cylinder with a dead mans type control and shall be able to operate with one hand by the operator in any position.
- The tools shaft be provided either with two hoses, one for pressure line and other for return line, or one hose having pressure line and return line within the same hose. The hoses shall be fitted in the center of the control handle to avoid personal harm in case of leakage. The hoses shall allow full 360° rotation and shall be equipped with anti-kink springs over the entire length, in the case of dual hose system.
- The tool body, yokes, and spreader arms shall be made out of high quality aluminum alloy for solid construction with low weight. All aluminum alloy parts shall be Anodised as a protection against corrosion and scratching. All hinge pins, levers and cutter blades shall be made out of high tensile (heat treated) tool steel and blackened as protection against corrosion.
- The construction of the tool should be so as to allow its use under water for long periods without the risk of any material damage to any part of the tool.
- All hydraulic tools, pumps, hoses and accessories would be fully operational for longer periods at temperatures ranging from -5° to 50°C.

- The tools shall be supplied with proper operation/ safety instruction manuals, according to the CE, NFPA or equivalent standards. Operation and safety instructions shall be on the tools and shall be in pictogram style so that they can be understood by all operators easily.

Technical Specification of Tools :

SPREADER

- The spreader shall be double acting hydraulically operated device, of light weight construction made of anti corrosive high strength material capable of being lifted, and operated manually with ease. The details and design features of the spreader and its controls and material used for construction of its major components such as arms, cylinders and other components shall be given in the offer.
- The spreader would be capable of spreading and pulling with the combination of chains. In the tool with two hose system the tool shall be supplied with connection hoses of 0.5 long and complete with coupling, dust cap and protection springs over total length. The female coupler should be of automatic self-locking system type. In the case of one hose system a male connector shall be fitted to the tool to connect the hose.
- The spreader shall be provided with spreading tips made of fully hardened, high tensile tool steel with proper serrations outside and inside for a perfect grip during spreading as well as squeezing operation. The tips shall be mounted on the spreader arms by means of a quick locking system. This quick lock system shall provide the possibility to change the spreading tips for cutting tips or pulling adaptors with single hand without loosing any parts and without the need for extra tools.

Max. Spreading distance	Greater than or equal to 650 mm
Min. Spreading force	Not less than 40 kn
Max. Spreading force	Not less than 300 kn
Max. Squeezing force	Not less than 60 kn
Max. Pulling force with pulling attachments	Not less than 80 kn
Weight	Not more than 22 kgs.

CUTTER

- The cutter be double acting hydraulically operated device of light weight construction made of anti-corrosive high strength material. The details and design features of the cutter and its controls and material used for Construction of major components such as blades, cylinders and other components shall be given in the offer.

- The cutter shall be capable of cutting various sections such as solid ground bar, hollow round bar, flat section, square tube, rectangular tube etc. It should also be enough to cut the door pillars of new generation cars.
- In the tool with two hose system the tool shall be supplied with connection hoses of 0.5 meter long and complete with coupling, dust cap and protection springs over total length. The female coupler should be of automatic self-locking system type. In the case of one hose system, a male connector shall be fitted to the tool to connect the hose.
- The cutter blade shall be parrot type, the cutting blades shall be of shock resistant non corroding alloy steel, hardened and shall be exchangeable and regrindable. The material specification of the cutting blades and hardness shall be indicated in the offer.

The cutter shall have following specifications:

Blade opening	—	More than 180 mm
Cutting force	—	Not less than 900 kn
Weight ready for use	—	Not more than 22 Kg

The material of the steel profiles shall conform to EN, NFPA or equivalent standards.

Hydraulic Power Pack (Petrol Engine Operated) :

- The petrol driven hydraulic power pack shall be capable of powering tools independently and have connection possibility for additional tools. For this purpose the pump shall be provided with separate connecting valves, incorporating a manually operated pressure release valve. The valve shall have two positions, operation or neutral. Even when under full pressure the release valve should be easy to operate and to release the pressure. This arrangement is not applicable for one hose system. The hydraulic pump shall be driven by a 4-cycle, single cylinder, air cooled petrol engine. The power of the engine shall be sufficient to drive the hydraulic pump to give output sufficient to operate the two tools simultaneously without reduction in the speed.
- The petrol tank capacity shall be such that, it allows the engine to run for minimum one hour when the tools are in continuous operation.
- The starting system of the engine shall be hand recoil type and the starting rope shall wound automatically in, when released.
- The engine and the pump shall be mounted on suitable tubular carrying frame with integrated carrying handle.

- Suitable gauges shall be provided to find out the quantity of fuel and hydraulic oil in the power pack, and same shall be easily accessible. The provision shall also be made to refill the petrol and hydraulic oil through wide filling opening which shall be covered with threaded cap.
- All the hot parts of the power pack shall be properly shielded to avoid possibility of injury to the operator.
- Preferably there shall be provision of light near the valve block for ease in operation during the night time.
- All the controls on the power pack shall be easily accessible and properly labeled in English language.
- The weight of the power pack including hydraulic oil and fuel shall not be more than 25 kgs.
- The power pack shall be provided with 3 stage axial/radial piston pump with a minimum output of 2500-3000 cc/min per valve in the first stage and atleast 1000-1250 cc/min per valve in the second stage and atleast 500cc in the third stage. Each pump shall be provided with an automatic change-over valve that switches the first stage output to no load to assure the high output in first, second stage and third stage. Each pump shall be protected with internal safety valves for factory set at a suitable maximum pressure.
- The capacity of hydraulic oil tank shall be 2.5 to 4 litres to supply the sufficient quantity of oil to two tools simultaneously with ample reserve capacity for the re-circulation of oil to avoid the over heating in prolonged operation.

SPECIFICATIONS

Engine	—	Petrol engine
Capacity oil tank (effective)	—	Approx. 4 liters
Pump	—	3 stage Axial/radial piston Pump
Weight	—	Not more than 60 kgs
No. of tools that can be connected	—	Two
No. of tools to be operated simultaneously	—	Two

- High quality 'Thermo Plastic' hose of 10 mtrs. In length for pressure and return line with quick connect couplings suitable to connect power pack and tools shall be supplied with the pump. Total 2 nos. of hoses of 10 mtr. each shall be supplied with the pump.

- The two hoses shall be in two different colours to identify easily. Non-interchangeable hydraulic coupling designed for quick connection/disconnection shall be provided with dust caps and complete with automatic self-locking system.
- The hoses shall have the pressure suitable for tools and the bursting pressure of the hoses be 4 times the working pressure.
- The pump shall have capacity to allow the ram to reach full extension since Rams use more hydraulic fluid during operation than spreader-cutters.

RAM

It should be compact, powerful and ensure high performances. The equipment should allow for faster, more efficient tool placement. The handle shall be deadman's type with accurate spring return to neutral position and the max. rotation to the right and to the left shall be less than 30°.

The Ram shall be preferably single plunger type. It shall be a hydraulically operated device of light weight, made of anti corrosive high strength material capable of being lifted, and operated manually with ease. The details and design features of the RAM and its controls and material used for construction of its major components such as plunger, cylinders and other components shall be given in the offer. The RAM would be capable of spreading and pulling with the combination of chains. In the tool with two hose system the tool shall be supplied with connection hoses of 0.5 long and complete with coupling, dust cap and protection springs over total length. The female coupler should be of automatic self-locking system type. In the case of one hose system a male connector shall be fitted to the tool to connect the hose.

The Ram shall be provided with suitable and adequate number of accessories for lifting and pulling purpose like chains, pulleys, extension pipes etc. The type and number of accessories that are to be provided with the ram should be listed and submitted along with the offer.

The Ram should comply with the following specifications:

Stroke	—	250mm to 700 mm
Length closed	—	500 to 900 mm
Length open	—	750 to 1500 mm
Weight	—	Less than 15 Kg
Max. Operating Pressure	—	720 Bar
Max. Spreading Force, 1st Section	—	Approx. 200 kN
Max. Spreading Force, 2nd Section	—	Approx. 75 kN

MANUAL PUMP

A suitable manual and portable pumping unit shall be provided with the tool set, which can be used to operate the above specified tools easily and effectively to effect rescue operations when the hydraulic pumping unit is out of service.

COMPLIANCE STATEMENT

A specification compliance statement in the following performa shall be submitted along with the offer, and the statement should be complete in all aspect and should cover each and every details of specification.

Specification compliance statement for Hydraulic Rescue Tools

<i>Sl. No.</i>	<i>Detail of Departmental Technical Specification</i>	<i>Detail of the product offered</i>	<i>Deviation from Departmental Technical Specification, if any</i>
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(Sd.)
Director (Admn.),
For Commandant General.